

## **Status of Depleted Dolphin Stocks in the Eastern Tropical Pacific Ocean (ETP)**

- Three dolphin stocks in the ETP are recognized as “depleted” under the Marine Mammal Protection Act (MMPA): the northeastern offshore spotted dolphin, eastern spinner dolphin, and the coastal spotted dolphin. A species is designated as depleted when it falls below its optimum sustainable population (OSP). The MMPA defines OSP as “the number of animals which will result in the maximum productivity of the population or the species...”
- Two of these dolphin stocks, the eastern stock of spinner dolphins and the northeastern stock of offshore spotted dolphins, are the primary targets of chase and encirclement by the tuna purse seine fishery in the ETP.
- NMFS scientists conducted dolphin abundance surveys for these dolphin stocks pursuant to the MMPA in 1998, 1999, and 2000. Results from the 1998 and 1999 are below, while the data from the 2000 survey is still undergoing analysis and peer review.

### **Eastern spinner dolphin and the northeastern offshore spotted dolphin stocks**

- The eastern spinner dolphin and the northeastern offshore spotted dolphin stocks are listed as depleted under the MMPA. At the time of listing, the eastern spinner dolphin was estimated at approximately 44 percent of its pre-exploitation population size. The northeastern offshore spotted dolphin was estimated to be between 19 and 28 percent of its pre-exploitation population size.
- In 1998 and 1999, NMFS carried out line-transect surveys of dolphin abundance in the ETP. From these surveys, the 1998 and 1999 abundance estimates for the northeastern offshore spotted dolphin were 1,011,104 and 592,423, respectively. The point estimates of 1999 abundance for northeastern offshore spotted dolphins are lower than, but not significantly different from, the 1998 estimates.
- The 1998 and 1999 abundance estimates for the eastern spinner dolphins were 1,157,746 and 338,961, respectively. The point estimate of 1999 abundance for eastern spinner dolphins is significantly lower than the 1998 estimate. Since identical methods were used, the reason for this difference is not clear; both should be considered equally valid estimates of abundance. The confidence limits, or uncertainty, of these data is high due to the difficulty of sampling highly mobile animals in an extremely large area. There were only two ships conducting the surveys in 1999 instead of three in 1998.
- Details of the above abundance estimates, including the full reports, can be found on the Southwest Fisheries Science Center, Marine Mammal Division's web site at <http://swfsc.ucsd.edu>

### **Coastal stock of spotted dolphins**

- In 1980, the coastal stock of spotted dolphins was first recognized as depleted under the MMPA. These dolphins are found within 100 nautical miles of the coast in the ETP, and the stock is sufficiently distinct to be described as a separate subspecies.
- The 1999 abundance estimate for this dolphin stock was 73,866. Dolphins from this stock are among those killed incidentally in the tuna purse seine fishery, but the extent to which this mortality has affected the population is unknown. During the early years of the purse seine fishery, fishing effort was concentrated near the coast. Therefore, coastal dolphin stocks such as this one may have experienced high mortality.